



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,065	04/03/2001	Dae-Hwan Hwang	11349-P66541US0	9261

7590

08/25/2004

JACOBSON, PRICE, HOLMAN & STERN  
PROFESSIONAL LIMITED LIABILITY COMPANY  
400 Seventgh Street, N.W.  
Washington, DC 20004

EXAMINER
----------

LY, ANH VU H

ART UNIT	PAPER NUMBER
----------	--------------

2667

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/824,065

Applicant(s)

HWANG, DAE-HWAN

Examiner

Anh-Vu H Ly

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities: in lines 11-12 "the other network" lacks antecedent basis. Further, claim 1 did not terminate with a period. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards et al (US Patent No. 6,771,647 B1) in view of the admitted prior art disclosed in the specification in pages 1-8 and Figs. 1-6.

With respect to claim 1, Richards discloses in Fig. 5, on-chip architecture of the SAR engine includes Utopia port 2 which is interfaced between the ATM physical layer and the SAR engine (an UTOPIA interface means for controlling a standard connection between the ATM SAR and a physical module), CRC engine 7 for implementing AAL5 CRC processing (a generation means for transmitting a CRC32, which is a block to generate 32 bits CRC block, necessary for the AAL5 PDU and calculating AAL5 PDU in a virtual unit), DMA engine 9 (a memory control means for generating a control signal for accessing a packet memory) for controlling the access of on-chip SRAM 10 (a packet memory means for storing data to be received or transmitted through the ATM SAR), STS20-C2 CPU core 12 for controlling all

Art Unit: 2667

elements of the SAR (an ATM SAR state management means for controlling whole operations of the ATM SAR), and control logic 6 for extracting the ATM header information and applying the header information to the CAM over an internal bus 22 (a header manager means for adding or analyzing 4 octets ATM header according to virtual channel set up information of a transmitted AAL5 PDU and data types to be processed). Richards discloses (col. 6, lines 19-23) that incoming data is received from the ATM physical layer 1 at port 2. The UTOPIA port 2 performs an error check on four bytes of the ATM cell header by calculating a check, such as a CRC, and comparing that with the HEC word in the fifth byte (a generation means for receiving CRC32 that is a block to check an error of the AAL5 PDU inputted through the other network). Richards discloses (col. 19, lines 25-30) that the segmentation CRC field used for outgoing contexts is in a similar format to that of the reassembly CRC, containing either a 10 bit CRC for streams such as OAM, RM, AAL3/4 or a 32 bit CRC for AAL5 streams, as defined by the ATM Forum and other standards (a CRC10 processing means for transmitting and receiving a CRC10 that processes the OAM cell). Richards does not disclose that the ATM SAR engine is for xDSL communication service chip. The admitted prior art disclosed in the specification on pages 1-8 and Figs. 1-6 that ATM SAR is well known and widely used in xDSL communication service chip. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of using the ATM SAR of Richards in xDSL communication service chip, as suggested by the admitted prior art, to deliver or provide high speed internet services to subscribers.

With respect to claim 2, Richards discloses in Fig. 8 that the memory 10 is accessible for transmitting and receiving (wherein the packet memory means is dual port memory).

With respect to claim 3, Richards discloses in Fig. 8 that the memory includes sections for storing and accessing the transmitted and received data (wherein the packet memory means includes a transmission and reception packet memories).

With respect to claim 4, Richards discloses in Fig. 8, that the transmit buffer and receive buffer are symmetrically assigned for the virtual circuits (wherein the transmission and reception packet memories are memories which are symmetrically assigned according to traffic characteristic of a virtual channel to be set at the same time).

With respect to claim 5, Richards discloses in Fig. 8, the structure of the buffer memory for dynamically storing the transmitted and received data according to a virtual channel assignment (wherein the transmission and reception packet memories are dynamically reassigned according to a virtual channel assignment).

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miller et al (US Patent No. 5,796,735) discloses system and method for transmission rate control in a segmentation and reassembly circuit under ATM protocol.

Art Unit: 2667

Muller (US Patent No. 6,044,418) discloses method and apparatus for dynamically resizing queues utilizing programmable partition pointers.

Aiken et al (US Patent No. 6,625,709 B2) discloses fair share dynamic resource allocation scheme with a safety buffer.

Kwak (US Patent No. 6,262,995 B1) discloses ATM adaptation layer processing method.

O'Neill et al (US Patent No. 6,243,382 B1) discloses interfacing to SAR devices in ATM switching apparatus.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avl

KWANG BIN YAO  
PRIMARY EXAMINER  
KWANG BIN YAO  
PRIMARY EXAMINER

